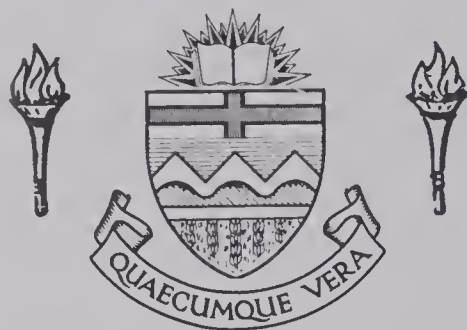


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QUALIFICATIONS OF VOCATIONAL TEACHERS

IN ALBERTA



BY

EMIL JOSEPH FIALA

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "Qualifications of Vocational Teachers in Alberta" submitted by Emil Joseph Fiala in partial fulfilment of the requirements for the degree of Master of Education.

ABSTRACT

The purpose of this study was to survey the qualifications of vocational teachers in the senior high schools of Alberta in order to determine the need for up-grading their competency in their trade areas.

The questionnaire was mailed to the principals of all schools who were listed by the Department of Education as offering courses in vocational education. Thirty-nine out of forty schools replied and this included 347 replies out of a population of 401 teachers or a return of 86.53 percent.

In spite of their present qualifications, there was a strong indication that up-grading was desirable. The most popular institution chosen as the milieu for up-grading was the university but there was a strong desire for courses from the technical schools and some preferred industry for this purpose. All age groups felt very strongly about maintaining their memberships and connections with their trade areas and about 82.0 percent of this group valued evening courses for teaching trade skills. The need for periodic evaluation of occupational competency was indicated by about 65.0 percent of the respondents while 72.56 percent felt that working in industry would increase this competency. Seventy-five percent felt there was a need for periodical up-grading.

About 97.0 percent rated their present competency as adequate and when asked under what conditions they would return to industry, an executive position was more highly preferred to a higher salary. The A.T.A. specialist council was felt by 46.95 percent of the respondents to be of no value in helping to keep trade knowledge up to date.

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CHAPTER I

RATIONALE AND INTRODUCTION

Technology, expanding at an exponential rate, will in all probability require that teachers be examined on both their trade competence and teaching competence not only upon entrance into the field but at frequent intervals after entrance as well. Teacher certification regulations will have to reflect these criteria. At present they do not, for while regulations exist to insure that teaching competence is evaluated both initially and at intervals during the teacher's career, regulations, other than the possession of a journeyman's certificate, do not exist to insure that trade competence is evaluated both initially and at intervals during the teacher's career. It should be noted that Lee (1938) supports the idea that an instructor "be master of two occupations -- the one he is to teach, and the vocation of teaching [p. 22]."

The likelihood of attaining desirable educational outcomes is increased when competent teachers are obtained. Since both professional educators and the lay public generally agree that the value of an education program is largely dependent upon the teaching conducted in the classroom, this agreement places strong emphasis on the identification of qualified and able personnel to staff educational institutions. Administrators should therefore inquire into both the ability of the vocational teacher to teach and his knowledge of the trade or occupation.

The long-range educational policy statement of the Alberta Teachers' Association states:

The preparation of a teacher for initial certification requires:
(a) general education, subject preparation, study of methods of teaching, student teaching, and internship; (b) adequate instruction in ethics and professionalism; (c) university entrance standards

equivalent to those of other faculties; (d) four years of university level study beyond recognized university entrance, i.e., 12 years of elementary and secondary education plus four years of university level work, provided that a degree has been earned during or at the end of the period of university study; (e) that at least two of the university years, which include the methods and practice teaching prerequisite to initial certification, be taken on a campus which prepares other professionals; (f) that at least half of the four years of university preparation be common for all teachers regardless of specialization and that advanced preparation for specialization follow initial certification; (g) selection procedures based on such factors as mental and physical health, spoken and written English; (h) that institutions which prepare teachers have at least half of their students who are engaged in university work enrolled in arts or science or in preparation for another profession (Members' Handbook, 1969, p. 178).

There are no university courses to prepare teachers to teach individual trades (e.g. Electricity, Drafting). Teachers take courses which prepare them to teach, together with a sequence of courses related to their trade. Further, there are no courses to provide "advanced preparation for specialization following certification" as indicated for (f) above. Apparently academic qualifications rather than trade qualifications are becoming more important in determining who shall teach vocational education in the public schools -- no provision will be introduced to check trade competencies or to include them for teacher certification.

I. THE PROBLEM

Certification is based on academic and trade qualifications, but not on trade competency. This statement raises the following question: Should tests of trade competency be added to present certification requirements by educational institutions of Alberta when hiring vocational teachers, and at periodic intervals after certification? As John L. Feirer (1968) says "a carpenter may have ten to fifteen years of experience in

traditional construction, but he may know little or nothing about such current practices as modular construction, stressed skin panels and roof trusses p. 19 Feirer also suggests that high vocational competence is no substitute for teaching experience and vice versa. French (1966, pp. 26-33) argues further, that no matter how well qualified a new instructor may be, the present rate of change in trade and technological occupations will demand refresher courses at least within ten years. He states that administrators should determine the degree of sophistication for each of the following criteria before appointments are made:

"academic technical knowledge, industrial experience, and a knowledge of pedagogical principles and skill to apply this knowledge [p. 41]."

One of the purposes of this study was to gather data on trade qualifications to determine whether vocational teachers are adequately screened as to their technical competencies not only upon being hired, but at periodic intervals during their teaching career.

II. IMPORTANCE OF THE STUDY

Although the problem is recognized in educational circles, this information may assist directors and administrators in developing practices that will assure the selection and perpetuation of up-to-date vocational teachers. Questions to be studied or answered include the following:

- (a) Is upgrading desired by vocational teachers? (b) What are their trade qualifications? (c) What are their professional qualifications? (d) Should trade competencies be checked at periodic intervals? The application of this knowledge may also aid in the identification of teachers suitable for promotions within the vocational schools of the province.

It may also aid in the present search for useful areas of endeavour for in-service education and professional development of the staff of vocational schools. The question arises that present criteria may not be as valid today as they have been in the past. Perhaps trade competency requirements for licensing should also be re-examined from time to time as the practice would be highly valuable and conducive to good instruction. Evidence seems to indicate that, a vocational teacher should be examined on his trade competency as well as on his teaching knowledge not only before he is certified, but also before being hired by a school board, and before getting a pay increase. Candidates with recent technological courses or in-service training in industry should be prime sources for new positions - the kind of teachers the province requires. Experienced teachers should be required to keep up-to-date in their trade areas.

Examinations to evaluate the competency of teachers in trade and industrial education are used by some institutions particularly in the United States. Some use the written examinations, while others insist on some type of performance test for evaluating vocational skills and knowledge. If a trade competency examination in both the written and performance areas was developed or available, the "years of experience" requirement for certification of the vocational teacher could become unnecessary.

III. DEFINITIONS OF TERMS USED

Vocational Teacher

Any person qualifying for certification under regulations of the University of Alberta pertaining to the requirements of the Department of Industrial Arts and Vocational Education.

Academic Competence

Knowledge of subjects required for teacher certification.

Teaching Competence

Pedagogical ability in presenting the subject content.

Occupational Competence

For purposes of this thesis occupational competence is used interchangeably with trade competence. This is consistent with its contemporary usage in current periodicals.

Trade Competence

The measure of the ability to perform and be knowledgeable in up-to-date practices and theory. The proficiency of tradesmen in the practical and theoretical abilities pertaining to their specialty.

IV. DELIMITATIONS OF THE STUDY

This descriptive study of the upgrading of trade qualifications of vocational teachers was limited mainly to trade competencies as these are the criteria which are not presently insisted upon by certification regulations in the province. Academic qualifications were considered only when they pertained to trade competency. It was further delimited by its restriction to the surveyed data on theoretical knowledge requirements and the necessity for a performance test as indicated in the statement of the problem.

In addition the study was limited to teachers of vocational education in the high schools of the province as listed by the Department of Education. It did not include vocational business education teachers.

CHAPTER II

REVIEW OF THE LITERATURE

A performance test to assess a person's ability to teach a vocational subject is considered a desirability by many administrators. Shimberg (Griesse, 1968) states that "today it is generally conceded that written tests of trade knowledge are not a very dependable way to evaluate shop performance and that without some type of direct or indirect performance measure it is unlikely that we can make an accurate assessment of an individual's trade competency [p. 35]."

Provincial certification requirements and needs for teachers in educational programs must be determined. The University of Alberta program in vocational education began in 1962. An influx of 715 teachers into Vocational Education (Technical Vocational plus Business Education) justifies further regulation of certification requirements and the Department of Education should provide the best possible teacher for the students of vocational education in Alberta. A gradual saturation is taking place in all subject areas and therefore more careful screening should be used. Shortages of instructors may necessitate sub-standard candidates, but with saturation, better selection should result. There is a growing need for trade proficiency tests on the national scale for new teachers as well as veterans in the field as all the provinces now have some form of vocational education. Provincial certification requirements for both education and occupational experience should pose no barrier to the employment of properly qualified vocational teacher candidates.

Emerson (1965) states that for technical schools, teacher training is "far from what our needs are going to be [p. 189]." He goes on to say that technical instructors are hard to get and hard to keep up to date. Therefore, proper placement or assignment of a teacher to a position in a school or school system is not as important as ensuring the best use of the trade knowledge of the individual. Administrators must be guided not only by the teacher's preparation as shown by his university transcript or by his experience, but by the following criteria also:

- (a) academic competence
- (b) trade competence
- (c) teaching competence

It is true that a teaching certificate seems to indicate that the vocational teacher has a minimum level of preparation and that it confers a legal right. It does specify, to some extent, task assignments and a fitness to teach. However, there is a fundamental difference between the teaching aims of a high school, a technical institute and university. There is also a difference between teaching vocational skills in vocational courses and teaching these skills as part of a general education. Vocational courses prepare the student for the world of work and for specific employment as technicians and tradesmen. With this philosophy in mind (Hall, Dennis, 1968) "a skilled and inspired teacher can work wonders in almost any circumstance [p. 17]." The quality of education provided for any pupil is dependent on the calibre of the educators themselves. In the past an instructor was able to tell the student what he must find out and apply, but in our fast moving age of modern technology the focus must be more on how to be up-to-date.

Five considerations for the construction of performance examinations have been suggested:

- (1) The sampling of activities should be as widespread as practical.
- (2) A minimum of easy or routine operations should be included.
- (3) The task should be sufficiently exact to permit accurate standardization and enable objectives to be made.
- (4) The task chosen should have face validity to command the respect of the examinee.
- (5) Tools and equipment should be reduced to a minimum and should be capable of standardization (Griesse, 1968, p. 35).

The principle of a trade competency examination should be accepted by vocational teachers just as educators are aware of the principle of up-grading academic qualifications. Trade qualifications become obsolete and require the same up-grading as academic subjects do. Since obsolescence is recognized as a factor in teacher competence, instructors should be competent in relatively recent trade knowledge. As there has been an exponential growth in trade knowledge, the trade teacher is particularly vulnerable. Therefore recent trade skills, teaching knowledge and academic competence must be criteria in the selection of vocational teachers. Education is aware of the problems of exponential growth in preparing academic teachers. The value of seminars and workshops is recognized in an attempt to keep the teacher abreast of the latest knowledge in the academic field. However, there is an inadequacy in the awareness that a vocational teacher may be obsolete because he was certified many years before. Perhaps competency tests should be administered when technical innovations make it necessary or whenever they are deemed to be desirable - e.g. when changing from one employer to another, or in order to qualify for a higher pay category.

Charles Allen in The Instructor the Man and the Job says that the best instructor would be "a first class man on his job, but adaptable to change from production to instructional conditions [p. 32]." He also suggests a need for supervisory experience" . . . provided it has not been so long that the man has lost the feel of his job [p. 32]." Lee (1938, p. 225) suggests that vocational instructors should meet acceptable standards pertaining to practical working experience, technical education, general education, teaching experience and supervisory or administrative experience. The standards for these qualifications, he says, should be established by the education authorities. Gregoire (1967) in a report to the Organization for Economic Co-operation and Development says that "a disquieting number of vocational schools are operating with teachers whose qualifications do not satisfy the national standards [p. 130]." Benjamin J. Stern (1967) of New York questions one of the hiring or recruiting criteria of some boards ". . . in the light of changing industrial conditions, is it realistic to require such extensive experience in trades that are in the process of changes that may make such backgrounds meaningless [p. 34]." However, a study (Griesse, 1968) at Rutgers University into the feasibility of establishing national proficiency examinations in the United States "identifies a growing need for trade proficiency tests [p. 35]." Dr. Gordon F. Law (1968), editor of Research Visibility states that "subsequent investigations are needed to follow up on the work begun at Rutgers. Further research is also needed to test preliminary findings that support the need for both written and performance examinations [p. 45]."

Up-dating Trade Competencies

Stout State University reports an up-grading arrangement between industry and education (Entorf and Callender, 1969, p. 7) in which a foundry supervisor from Deere and Company was exchanged with a foundry instructor from the University. Each employer carried the respective salaries of its employees while both of the people benefited; one adding to his trade competency and the other to his instructing ability. Dobrovolny (1970, p. TE2) feels that technical teachers should be encouraged to spend part of their summers in industry learning about changes in their subject matter specialty. Feirer (1970) in a very recent article stresses the need of technical staff "to keep up-to-date with developments in their own specialty and in educational areas p. TE15 ."

Another method for ensuring up-to-date trade competency for beginning teachers is offered at Purdue (Technical Education News, 1969, p. 20). A B.S. degree offered at that university enables the vocational teacher to spend 32 to 35 semester hours of instruction in his occupational specialty.

Despite the literature (Gibbs, 1969, p. 10) which indicates that most teachers enter teaching systems with almost the same salary they received in industry, the best selection of candidates is not guaranteed unless a trade competency test in theory and practice is used (Shimberg, as quoted previously). The investigator feels that this test should be given periodically to teachers in the field in order to qualify for a higher pay category. This would motivate the teacher to keep his trade competency up-to-date as Kahn (1970) states that teachers "will not take the trouble to improve until it is demonstrated that it is in their best interest to do so [P. 21]."

It should be noted that there is a need for studies concerning the relative values of occupational experience. Arguments pro and con are always influenced by opinion, tradition, emotion and hearsay. The valid sources of scientific inquiry are capable of measuring such criteria as job-related skills and knowledge and how they relate to vocational teaching competence. Some authorities may claim that skill and knowledge can be learned in a school situation. However, attitudes and patterns of behavior that are developed on the job are factors which are attributable to the insights fostered by the teacher because of his experience in industry. If the foregoing is true, then a comprehensive program for giving trade proficiency examinations to vocational teachers should be implemented. Further research will no doubt indicate the need for both written and performance tests.

Summary

Examinations to evaluate the occupational competency of teachers are used particularly in the United States. Both written and practical tests are in use. The proper placement of a teacher to a position in a school system is not as important as ensuring the best use of the trade competency of the individual. It is very important that this competency be kept up-to-date by up-grading teachers as their performance in their specialty becomes obsolete. The exponential growth of knowledge seems to indicate high priority for recent trade skills together with teaching knowledge and academic competence when selecting vocational teachers. Further research is needed to test preliminary findings that both written and performance examinations are desirable.

CHAPTER III

PROCEDURE

The procedures used in the design of the study are outlined in this chapter and include the population, the sample, a description of how the questionnaire was developed and the method of treating the data. Although the review of literature sufficiently indicated that a study of this type was a practical one, further justification was obtained by surveying six authorities in the field. A copy of the letter appears in Appendix A. Two post secondary institutions were surveyed, but it was decided not to survey the vocational teachers at that level. The study was based on two returns from the inspectors of business education and industrial education at the Department of Education, and also one each from the supervisor of vocational education for the Edmonton Public School System and the supervisor of vocational education for the Edmonton Separate School System (Appendix D).

I. THE POPULATION

The population of 401 high school teachers of vocational education in Alberta was surveyed. Their names were obtained from a list provided by the Department of Education. Due to the fact that some of the candidates indicated that the questionnaire did not apply to them, their returns were withdrawn from the population. Nineteen returns were not valid.

II. THE SAMPLE

The net amount of the returns after deducting those 19 and also the ones who did not reply totaled 328 teachers. These were divided into two groups. Those north of a line drawn through the city of Red Deer numbered 167. Those south of Red Deer numbered 161. The province was divided into the two halves in order to check for any differences between the two groups and it proved to afford some reliability when the two groups were compared. The sample thus selected represented 81.79 percent of the total population. Total returns numbered 347 or 86.53 percent but as previously mentioned, 19 were removed from the sample. The number of schools who participated were 40, but only 39 schools or 97.5 percent returned their questionnaires.

III. THE PILOT STUDY

A pilot study was conducted in order to obtain the reaction of teachers in the field as to any desirable changes to the instrument. Of 20 questionnaires distributed, 19 or 95.0 percent were returned with suggestions and changes. On the basis of these returns, the wording of six of the questions was altered and the number of questions were reduced from 37 to 35. The respondents were not aware of the identity of the investigator. As the investigator was well known to the surveyed group, complete anonymity in distributing the instrument was exercised. Some of the questions had been used previously in a study done recently (Swayze, 1969).

IV. COLLECTION OF DATA

The revised questionnaire was mailed to the 40 principals of the schools involved together with a list of vocational teachers in their schools. A copy of the instrument appears in Appendix B. In order to expedite the collection of the sample, a decision was made to use IBM answer sheets and to use the computer for the processing of the returns. The returned sheets were scored optically and the data was transferred to data cards. A computer program was written to yield frequency distributions and percentages for the north, south, and combined totals of the sample for the province of Alberta. It was necessary to telephone 12 schools in a follow-up to get the returns back in time for processing.

CHAPTER IV

PRESENTATION OF RESULTS

The data compiled in this chapter were derived from the questionnaire. Thirty-five questions were asked and the results of the survey were placed in tabular form indicating frequency and percentage of each reply in northern Alberta and in the southern part of the province. Combined totals appear in the third column of the data tables.

Distribution by Sex

Table I indicates that of 328 respondents, 17.68 percent or 58 instructors were female and 81.40 percent or 267 instructors were male. Southern Alberta had fewer female instructors than the north but there were more male instructors in the north.

Distribution by Age

Table II indicates that the greatest number of vocational teachers in the province, that is 113 or 34.45 percent, are in the 31 to 39 years of age category. However, the majority of instructors in the province are over 40 years of age, with only 9 people under the age of 26. The similarity of ages between the north and south was high and only in the 40 to 49 year category was there any appreciable difference. Forty-four instructors in the south belonged to this age group as compared with 60 teachers in the north. The difference was 8.6 percent more northern people represented.

TABLE I
DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS BY SEX

Sex	South		North		Alberta Total	
	f	%	f	%	f	%
Male	135	83.85	132	79.04	267	81.4
Female	25	15.53	33	19.76	58	17.68
No Answer	1	.62	2	1.20	3	.91
Total	161	100.0	167	100.0	328	100.0

TABLE II

DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS BY AGE

Age	South		North		Alberta Total	
	f	%	f	%	f	%
20 - 25 Years	4	2.48	5	2.99	9	2.74
26 - 30 Years	15	9.32	13	7.78	28	8.54
31 - 39 Years	58	36.02	55	32.93	113	34.45
40 - 49 Years	44	27.33	60	35.93	104	31.71
50 Years and Over	39	24.22	34	20.36	73	22.26
No Answer	1	.62	0	0.00	1	0.30
Total	161	100.0	167	100.0	328	100.0

Distribution by Employment

Table III shows that 34.15 percent or 112 people comprise the group which have been employed by their present school board for two to three years. Most people fell into this group followed by 83 teachers or 25.3 percent who had been employed by the same board for one year. Only 21 or 6.4 percent of the total had been with their present employer for more than ten years. The table indicates that only 39.33 percent of the vocational teachers in Alberta had more than three years of teaching experience with their present employer at the time the data were collected.

Distribution by Years of Teaching Experience

As shown in Table IV, most vocational teachers belonged to the group who had less than four years of teaching experience. The percentage in the north of the province was 5.98 percent greater in number than those in the south. This group accounted for 110 teachers or 36.59 percent of the total. The age category of four to six years represented 87 numbers or 26.52 percent of the total while 53 teachers or 16.16 percent had taught between seven and ten years. Vocational teachers with eleven to fourteen years of experience numbered 23 people or 7.01 percent while 13.72 percent had taught for more than fifteen years. The difference between the north and south groups was very consistent except for the under three year group as mentioned above.

TABLE III

DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS BY EMPLOYMENT AT PRESENT INSTITUTION

Number of Years Employed at Present Institution	South		North		Alberta Total	
	f	%	f	%	f	%
1 year	39	24.22	46	27.54	83	25.3
2 - 3	59	36.65	53	31.74	112	34.15
4 - 5	16	9.94	31	18.56	47	14.33
6 - 9	33	20.50	28	16.77	61	18.6
10 or more	14	8.70	7	4.19	21	6.4
No Answer	0	0.00	2	1.20	2	0.61
Total	161	100.0	167	100.0	328	100.0

TABLE IV
DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS BY YEARS OF TEACHING EXPERIENCE

Years of Teaching Experience	South		North		Alberta Total	
	f	%	f	%	f	%
1 - 3	54	33.54	66	39.52	120	36.59
4 - 6	43	26.71	44	26.35	87	26.52
7 - 10	26	16.15	27	16.17	53	16.16
11 - 14	11	6.83	12	7.19	23	7.01
15 or more	27	16.77	18	10.78	45	13.72
No Answer	0	0.00	0	0.00	0	0.00
Total	161	100.0	167	100.0	328	100.0

Distribution by Years of Work Experience

Table V reports on the number of years of industrial experience the vocational staff have in the province of Alberta. Ninety-three of the people surveyed or 28.35 percent had more than twenty years of experience in industry.

The majority, accounting for 68.9 percent, had more than ten years or work experience and only 10.98 percent had five years or less. The sixteen to twenty year group showed an increase of 7.82 percent between the north and south of the province, otherwise the results for the other groups were proportionately the same. Four people declined to answer the question.

Teachers Taking Courses to Improve Qualifications

Evidence from Table VI indicates that 45.73 percent of vocational instructors were taking university courses in order to improve their qualifications. Only 3.35 percent were taking courses at a technical institute while 5.18 percent were taking courses in industry. About 45.0 percent were not trying to improve their qualifications in any way at the time of the survey. The figures indicate that about 55.0 percent of the vocational teachers in Alberta were engaged in upgrading their qualifications at that time.

Teachers Who Intended to Take a Technical Course in the Next Twelve Months

Table VII indicates that the most popular choice of institutions for instruction in technical courses was at a technical institute. However, there was an indication that 16.16 percent favoured the industrial milieu

TABLE V

DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS BY YEARS OF WORK EXPERIENCE

Years of Work Experiences	South		North		Alberta Total	
	f	%	f	%	f	%
1 - 5	22	13.66	14	8.38	36	10.98
5 - 10	32	19.88	30	17.96	62	18.9
11 - 15	32	19.88	37	22.16	69	21.04
16 - 20	25	15.53	39	23.35	64	19.51
21 or more	48	29.81	45	26.95	93	28.35
No Answer	2	1.24	2	1.20	4	1.22
Total	161	100.0	167	100.0	328	100.0

TABLE VI
DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS WHO ARE TAKING
COURSES TO IMPROVE QUALIFICATIONS

Institution Where Courses are Being Taken	South		North		Alberta Total	
	f	%	f	%	f	%
University	61	37.89	89	53.29	150	45.73
Technical Institute	6	3.73	5	2.99	11	3.35
Correspondence and/or High School	2	1.24	1	0.60	3	0.91
Industry	13	8.07	4	2.40	17	5.18
Not Taking a Course	79	49.07	67	40.12	146	44.51
No Answer	0	0.00	1	0.60	1	0.30
Total	161	100.0	169	100.0	328	100.0

TABLE VII

DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS WHO INTEND TO TAKE A TECHNICAL
COURSE IN NEXT TWELVE MONTHS

Institution Where Courses Will be Taken to Improve Trade Qualifications	South		North		Alberta Total	
	f	%	f	%	f	%
University	32	19.88	47	28.14	79	24.09
Technical Institute	40	24.84	40	23.95	80	24.39
Correspondence and/or High School	1	0.62	2	1.20	3	0.91
Industry	23	14.29	30	17.96	53	16.16
Other	15	9.32	21	12.57	36	10.98
No Answer	50	31.06	27	16.17	77	23.48
Total	161	100.0	167	100.0	328	100.0

for up-grading. About 24 percent preferred a university and 10.98 percent preferred other institutions. Seventy-seven people indicated that they were not taking a technical course in the next twelve months. Teachers in northern Alberta preferred university training by an 8.26 percent margin.

Level of Training Adequacy

Table VIII reveals that 86.89 percent of the instructors judged their qualifications to be satisfactory or better. Only 12.2 percent felt that their training was inadequate or less than satisfactory. Three people declined to answer the questionnaire and there was a very close comparison between north and south.

Desire to Return to Industry

It seems that the desire to return to industry can be motivated primarily by the appointment to an executive position. Table IX indicates that 29.57 percent of the total number of vocational teachers in the high schools are interested in returning to industry only in an administrative capacity. About four percent indicated that an equivalent salary would be adequate to entice them back to industry and 13.41 percent considered returning to industry if their job conditions showed no sign of improvement. High salaries were considered to be an incentive to return to the trade by 17.07 percent of the respondents, while 32.62 percent felt that they would be interested for other reasons. Eleven of the respondents had no opinion as they did not answer the question. Returns from north and south were fairly agreeable on each group of responses.

TABLE VIII
DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS BY LEVEL OF TRAINING ADEQUACY

Training	South		North		Alberta Total	
	f	%	f	%	f	%
Very Adequate	41	25.47	50	29.94	91	27.74
Adequate	57	35.40	62	37.14	119	36.28
Satisfactory	37	22.98	38	22.75	75	22.87
Inadequate	23	14.29	13	7.78	36	10.98
Very Inadequate	1	0.62	3	1.80	4	1.22
No Answer	2	1.24	1	0.60	3	0.91
Total	161	100.0	167	100.0	328	100.0

TABLE IX

DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS BY DESIRE TO RETURN TO INDUSTRY

Condition Under Which a Position In Industry Would Be Accepted	South		North		Alberta Total	
	f	%	f	%	f	%
If the Salary Was the Same as Presently Received	4	2.48	9	5.39	13	3.98
If Job Conditions Do Not Improve	19	11.80	25	14.97	44	13.41
If the Salary was Higher	30	18.63	26	15.57	56	17.07
If at an Executive Level	50	31.06	47	28.14	97	29.57
Other	52	32.30	55	32.93	107	32.62
No Answer	6	3.73	5	2.99	11	3.35
Total	161	100.0	167	100.0	328	100.0

Were Courses Discussed With Fellow Instructors

Table X provides evidence that 54.88 percent of the teachers worked in cooperation with there colleagues. Courses were discussed frequently with only 5.49 percent reporting that they had never discussed their work with fellow instructors.

Discussion of Trade Courses With Members of Industry

Table XI shows that 19.21 percent of the teachers discussed the trade courses they were teaching with people in the industrial milieu. About sixty percent discussed their courses a few times while about 21.0 percent did not speak with members of their trade about the courses while they were teaching.

Years of Academic Training

Table XII shows that the majority or 55.49 percent of all the instructors had between three and four years of training. About 20.0 percent had five to seven years while 1.22 percent had eight to ten years of training. One person indicated more than ten years of training while 14.94 percent had less than three years. In comparing the north and south areas of Alberta it was noted that there were 5.28 percent or twelve more people in the three to four year category represented in the north. However, instructors in the five to seven year category were better qualified in the south by a margin of 6.51 percent or 9 teachers. The other groups were resonably alike in comparison between the two ares.

TABLE X
DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS BY DISCUSSING
TRADE COURSES WITH FELLOW INSTRUCTORS

Number of Times Courses Were Discussed During The Past Year	South		North		Alberta Total	
	f	%	f	%	f	%
Numerous	87	54.04	93	55.69	180	54.88
Few	66	40.99	62	37.13	128	39.02
Never	8	4.97	10	5.9	18	5.49
No Answer	0		2	1.20	2	0.61
Total	161	100.0	167	100.0	328	100.0

TABLE XI

DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS BY DISCUSSING TRADE
COURSES WITH MEMBERS OF INDUSTRY

Number of Times Courses Were Discussed During the Past Year	South		North		Alberta Total	
	f	%	f	%	f	%
Numerous	29	18.01	34	20.36	63	19.21
Few	98	60.87	98	58.68	196	59.76
Never	34	21.12	34	20.36	68	20.73
No Answer	0	0.00	1	0.60	1	0.30
Total	161	100.0	167	100.0	328	100.0

TABLE XII

DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS BY ACADEMIC TRAINING

Years of Academic Training Beyond High School	South		North		Alberta Total	
	f	%	f	%	f	%
1 - 2	25	15.83	24	14.37	49	14.94
3 - 4	85	52.80	97	58.08	182	55.49
5 - 7	50	31.06	41	24.55	91	27.75
8 - 10	1	0.62	3	1.80	4	1.22
11 or more	0	0.00	1	0.60	1	0.30
No Answer	0	0.00	1	0.60	1	0.30
Total	161	100.0	167	100.0	328	100.0

Years of Industrial Training

There was very little variation in the years of industrial training between teachers in southern Alberta and those in the northern part. Table XIII shows that 17.99 percent had one to two years of training, 28.96 percent had three to four years of training, 20.73 percent had five to seven, 7.62 percent had eight to ten, and those with more than ten years amounted to 22.26 percent. Eight respondents did not reply to the questionnaire.

Qualifications by Non-Educational Degrees

Judging by the data in Table XIV, the vocational teachers in Alberta's high schools had additional qualifications extra to their teacher certification qualifications. Eighteen or 5.49 percent had Arts degrees while Science degrees were represented by 10.06 percent. Degrees from other faculties amounted to 10.67 percent and 73.78 percent were unable to answer the three questions asked. The proportions in north and south were very similar.

Qualifications by Degrees in Education

The data in Table XV indicate that vocational teachers in the province of Alberta having a bachelor's degree represented 44.91 percent of the total. Those holding a graduate diploma represented 7.32 percent while 2.13 percent had master's degrees. Returns indicated that there were two vocational teachers with doctoral degrees teaching in the senior high schools of Alberta. Other qualifications in education accounted for 20.12 percent while 25.91 percent did not answer. Comparison of degrees

TABLE XIII

DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS BY INDUSTRIAL TRAINING

Years of Industrial Training Beyond High School	South		North		Alberta Total	
	f	%	f	%	f	%
1 - 2	30	18.63	29	17.37	59	17.99
3 - 4	45	27.95	50	29.94	95	28.96
5 - 7	33	20.50	35	20.96	68	20.73
8 - 10	15	9.32	10	5.99	25	7.62
11 or more	33	20.50	40	23.95	73	22.26
No Answer	5	3.11	3	1.80	8	2.44
Total	161	100.0	167	100.0	328	100.0

TABLE XIV

DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS BY NON-EDUCATIONAL DEGREES

Degree	South		North		Alberta Total	
	f	%	f	%	f	%
Arts	10	6.21	8	4.79	18	5.49
Science	15	9.32	18	10.78	33	10.06
Other	15	9.32	20	11.98	35	10.67
No Answer	121	75.16	121	72.46	242	78.78
Total	161	100.0	167	100.0	328	100.0

TABLE XV

DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS BY QUALIFICATIONS IN EDUCATION

Qualifications	South		North		Alberta Total	
	f	%	f	%	f	%
Bachelor's Degree	75	46.58	69	41.32	144	44.91
Graduate Diploma	13	8.07	11	6.59	24	7.32
Master's Degree	4	2.48	3	1.80	7	2.13
Doctorate	1	0.62	1	0.60	2	0.61
Other	28	17.39	38	22.75	66	20.12
No Answer	40	24.84	45	26.95	85	25.91
Total	161	100.0	167	100.0	328	100.0

between north and south closely resembled each other except that the teachers in the south indicated 5.26 percent more bachelor's degrees. About forty-six percent of the teachers were unable to indicate that they had a degree in education.

Types of Specialties

The bulk of teachers, according to the data presented in Table XVI, had indicated that their specialty was vocational education. Those numbered 75.3 percent. The next largest group numbered 8.23 percent in secondary education followed by 2.13 percent in special education and 0.91 percent in elementary education. Almost 9 percent failed to answer and 4.57 percent indicated that their specialty in education was other than those listed. In comparing the north and south, there were 11.27 percent more vocational specialists in the north.

Number of Bachelor's Degrees Held

Returns for Table XVII indicated that 45.43 percent of the instructors had one bachelor's degree and 5.49 percent had two with one person listing more than two. The data indicated 7.15 percent more people with one degree in the south while there were 3.46 percent more people in the north with two degrees. Partial credit towards the degree was held by 10.98 percent.

Number of Master's Degrees Held

Table XVIII indicates that eleven teachers or 3.35 percent held a master's degree. There was one more in the north according to the survey. No teacher held more than one degree at this level. Partial credit towards the degree was indicated by 3.66 percent of the respondents.

TABLE XVI

DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS BY SPECIALTY IN EDUCATION

Specialty	South		North		Alberta Total	
	f	%	f	%	f	%
Elementary	2	1.24	1	0.60	3	0.91
Secondary	16	9.94	11	6.59	27	8.23
Vocational	112	69.57	135	80.84	247	75.30
Special	3	1.86	4	2.40	7	2.13
Other	10	6.21	5	2.99	15	4.57
No Answer	18	11.18	11	6.59	29	8.84
Total	161	100.0	167	100.0	328	100.0

TABLE XVII

DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS BY NUMBER OF BACHELOR'S DEGREES HELD

Number of Degrees	South		North		Alberta Total	
	f	%	f	%	f	%
None	50	31.06	66	39.52	116	35.37
1	79	49.07	70	41.92	149	45.43
2	6	3.73	12	7.19	18	5.49
More than 2	1	0.62	0	0.00	1	0.30
Only Partial Credit Towards the Degree	18	11.18	18	10.78	36	10.98
No Answer	7	4.35	1	0.60	80	2.44
Total	161	100.0	167	100.0	328	100.0

TABLE XVIII

DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS BY NUMBER OF MASTER'S DEGREES HELD

Number of Degrees	South		North		Alberta Total	
	f	%	f	%	f	%
None	142	88.20	145	86.83	287	87.50
1	5	3.11	6	3.59	11	3.35
2	0	0.00	0	0.00	0	0.00
More than 2	1	0.62	0	0.00	1	0.30
Only Partial Credit Toward the Degree	4	2.48	8	4.79	12	3.66
No Answer	9	5.59	8	4.79	17	5.18
Total	161	100.0	167	100.0	328	100.0

Number of Doctorate Degrees Held

Table XIX shows one person with a Doctor's degree or 0.30 percent. This conflicts with the data in Table XV which indicated two doctoral degrees. There were 1.52 percent of the respondents with partial credit towards a doctorate. Eighteen people did not answer the question.

Number of Trade Certificates Held

Table XX shows that 67.07 percent of the instructors had one certificate in a trade area. There were 19.21 percent with two certificates and 4.27 percent with three. Less than two percent had four certificates and 0.91 percent or three people had five or more. Twenty-two teachers or 6.71 percent did not answer the question.

Classification of Certificates Held

Table XXI represents the classifications of the certificates reported in Table XX. There were 6.71 percent holding master's certification while the journeyman's certificate predominated with 53.96 percent. Technician's certification amounted to 11.89 percent of the total while 4.27 percent held a diploma in a trade area. About 15.0 percent had other certification while 7.93 percent did not reply. At the master's level there were 3.41 percent more people in the north of the province.

Distribution by Trade Area

According to Table XXII, the greatest number of people represented the mechanical trades. Those amounted to 29.27 percent. The

TABLE XIX

DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS BY NUMBER OF DOCTORATE DEGREES HELD

Number of Degrees	South		North		Alberta Total	
	f	%	f	%	f	%
None	150	93.17	154	92.22	304	92.68
1	0	0.00	1	0.60	1	0.30
2	0	0.00	0	0.00	0	0.00
More than 2	0	0.00	0	0.00	0	0.00
Only Partial Credit Towards the Degree	2	1.24	3	1.80	5	1.52
No Answer	9	5.59	9	5.39	18	5.49
Total	161	100.0	167	100.0	328	100.0

TABLE XX

DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS BY NUMBER OF TRADE CERTIFICATES HELD

Number of Certificates	South		North		Alberta Total	
	f	%	f	%	f	%
1	111	68.94	109	65.27	220	67.07
2	27	16.77	36	21.56	63	19.21
3	6	3.73	8	4.79	14	4.27
4	3	1.86	3	1.80	6	1.83
5 or more	2	1.24	1	0.60	3	0.91
No Answer	12	7.45	10	5.99	22	6.71
Total	161	100.0	167	100.0	328	100.0

TABLE XXI

DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS BY CLASSIFICATION OF CERTIFICATE

Classification	South		North		Alberta Total	
	f	%	f	%	f	%
Master's	8	4.97	14	8.38	22	6.71
Journeyman's	88	54.66	89	53.29	177	53.96
Technician's	21	13.04	18	10.78	39	11.89
Diploma	8	4.97	6	3.59	14	4.27
Other	20	12.42	30	17.96	50	15.24
No Answer	16	9.94	10	5.99	26	7.93
Total	161	100.0	167	100.0	328	100.0

second most populous group were those teachers who were certified in the construction area while those in the electrical trade were represented by 16.16 percent of the total. Commercial or business amounted to 4.57 percent while 27.74 percent belonged to other classifications. There were 5.49 percent who did not answer the question. Distribution between north and south differed in favour of the south in the mechanical area by a margin of 14.17 percent. There were also more electrical certificates amongst the teachers in the south. Those exceeded northern qualifications by 10.96 percent. However, there were 2.43 percent more vocational teachers with certificates in the construction area in the northern part of the province.

Number of Years Worked at the Trade

The information supplied by table XXIII shows that vocational teachers who represented the greatest number in terms of years worked were found in the ten or more years category and number 39.94 percent. The three to five year group showed a representation of 21.65 percent and were followed closely at 21.04 percent by the six to nine year group. There were 6.71 percent represented in the one to two year group while 4.27 percent of the vocational teachers in Alberta had spent less than one year on the job after trade certification. There were 6.4 percent who abstained from answering. The north and south compared quite closely but in the highest number of years worked category, the northern teachers varied by 7.69 percent more in number.

TABLE XXII
DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS BY TRADE AREA

Area	South		North		Alberta Total	
	f	%	f	%	f	%
Mechanical	53	39.92	43	25.75	96	29.27
Electrical	35	21.74	18	10.78	53	16.16
Construction	25	15.53	30	17.96	55	16.77
Commercial or Business	2	1.24	13	7.78	15	4.57
Other	34	21.12	57	34.13	91	27.74
No Answer	12	7.45	6	3.59	18	5.49
Total	161	100.0	167	100.0	328	100.0

TABLE XXIII

DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS BY NUMBER OF YEARS WORKED AT TRADES

Number of Years Worked Since Certification	South		North		Alberta Total	
	f	%	f	%	f	%
1 - 2	14	8.70	8	4.79	22	6.71
3 - 5	32	19.88	39	23.35	71	21.65
6 - 9	38	23.60	31	18.56	69	21.04
10 or more	58	36.02	73	43.71	131	39.94
Less than one	7	4.35	7	4.19	14	4.27
No Answer	12	7.45	9	5.39	21	6.40
Total	161	100.0	167	100.0	328	100.0

Ownership of Business

The data appearing in Table XXIV show that 31.40 percent of the teachers owned their own business at one time. Those were more highly represented in the north by an amount of 5.56 percent. Five people did not answer the question.

Courses Taken Related to Trade Area

The largest group of teachers who had not taken a related course of more than one month's duration numbered 27.13 percent and belonged to the more than ten year group. This indicates by the data in Table XXV that it was more than ten years since the group had taken a lengthy course. The seven to ten year category numbered 17.99 percent while those responding to the five to six year category numbered 11.89 percent. The three to four year category were represented by 18.29 percent and the one to two year group by 21.04 percent. Indications by the answers to the first three choices showed thirty-one more people in the north who had taken courses to improve their qualifications. This amounted to 17.65 percent more who had up-graded themselves in the past six years with courses related to their trade area.

Courses Taken in Trade Area

Table XXVI indicates the number of years since a course of greater than twelve months duration was taken by the respondent in his trade area. The most prominent category was the six to fifteen year group which data show that vocational instructors in the province who had not had a course during this interval of time numbered 41.77 percent. Forty-seven people or

TABLE XXIV

DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS BY OWNERSHIP OF BUSINESS

Have you owned a Business in your Trade Area	South		North		Alberta Total	
	f	%	f	%	f	%
No	113	70.19	107	64.07	220	67.07
Yes	46	28.57	57	34.13	103	31.40
No Answer	2	1.24	3	1.80	5	1.52
Total	161	100.0	167	100.0	328	100.0

TABLE XXV

DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS BY YEARS SINCE A COURSE WAS TAKEN
RELATED TO TRADE AREA

Number of Years Since Course of Greater than One Month's Duration Taken	South		North		Alberta Total	
	f	%	f	%	f	%
1 - 2	30	18.63	39	23.35	69	21.04
3 - 4	25	15.53	35	20.96	60	18.29
5 - 6	13	8.07	26	15.57	39	11.89
7 - 10	33	20.50	26	15.57	59	17.99
More than 10	51	31.68	38	22.75	89	27.13
No Answer	9	5.59	3	1.80	12	6.66
Total	161	100.0	167	100.0	328	100.0

TABLE XXVI

DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS BY YEARS SINCE A COURSE WAS TAKEN IN TRADE AREA

Number of Years Since Course of Greater Than One Month's Duration Taken	South		North		Alberta Total	
	f	%	f	%	f	%
1	18	11.18	14	8.38	32	9.76
2 - 3	20	12.42	27	16.17	47	14.33
4 - 5	17	10.56	34	20.36	51	15.55
6 - 15	74	45.96	63	37.72	137	41.77
16 or more	23	14.29	24	14.37	47	14.33
No Answer	9	5.59	5	2.99	14	4.27
Total	161	100.0	167	100.0	328	100.0

14.33 percent had not had a course in more than fifteen years. The four to five year category represented 15.55 percent while the two to three year group accounted for 14.33 percent. Relatively few teachers or 9.76 percent had taken a course within the last year and 4.27 percent did not reply to the question. Comparison of northern and southern regions showed a great disparity in favour of the north with a greater proportion by 9.8 percent of those who took courses in the four to five year group.

Desire for Sabbaticals to Industry

The most desirable length of time for a sabbatical to industry was chosen as five years by 45.12 percent of the total. Table XXVII shows also, that 12.8 percent of the teachers did not feel there should be sabbaticals to industry. The greatest difference between north and south was a greater desire amongst the southern group by 9.8 percent of the group who indicated that six years was the more favourable length of time before a sabbatical.

University Courses in Trade Competency

Table XXVIII shows a strong majority or 65.86 percent of the vocational teachers instructing in the senior high schools of Alberta want courses, which tie theory and practice together, offered by the university. Fifteen respondents or 4.57 percent did not attach any importance to the question. Other people surveyed or 9.15 percent seemed to have another viewpoint than those suggested. There were 6.1 percent who did not wish to answer and one person abstained. Comparisons between north and south indicated the same trend in both regions.

TABLE XXVII

DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS BY DESIRE FOR SABBATICALS TO INDUSTRY

Number of Years After Which There Should be Sabbaticals	South		North		Alberta Total	
	f	%	f	%	f	%
3	15	9.32	25	14.97	40	12.20
4	21	13.04	29	17.37	50	15.24
5	76	47.20	72	43.11	148	45.12
6	30	18.63	15	8.98	45	13.72
Do Not Think There Should Be	17	10.56	25	14.97	42	12.80
No Answer	2	1.24	1	0.60	3	0.91
Total	161	100.0	167	100.0	328	100.0

TABLE XXVIII

DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS WITH REGARDS TO UNIVERSITY COURSES
IN THEORY AND PRACTICE

Desire For University Courses in Trade Competency	South		North		Alberta Total	
	f	%	f	%	f	%
Feel Very Strongly They Should Be Offered	106	65.84	110	65.87	216	65.85
Do Not Feel They Are Very Important	22	13.66	24	14.37	46	14.02
Would Not Be Important	5	3.11	10	5.99	15	4.57
Do Not Wish To Answer	13	8.07	7	4.19	20	6.10
Other	15	9.32	15	8.98	30	9.15
No Answer	0	0.00	1	0.60	1	0.30
Total	161	100.0	167	100.0	328	100.0

TABLE XXIX

DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS WITH RESPECT TO THE VALUE OF A.T.A.
SPECIALIST COUNCIL

Does the Council Help to Keep Trade Knowledge Up-to-Date	South		North		Alberta Total	
	f	%	f	%	f	%
It is Very Valuable	6	3.73	9	5.39	15	4.57
It is Valuable	28	17.39	34	20.36	62	18.90
It is Not Valuable	73	45.34	81	48.50	154	46.95
Do Not Belong to It	28	17.39	23	13.77	51	15.55
Did Not Know It Exists	22	13.66	17	10.18	39	11.89
No Answer	4	2.48	3	1.80	7	2.13
Total	161	100.0	167	100.0	328	100.0

Value of the A.T.A. Specialist Council

Table XXIX indicates that 46.95 percent of the respondents did not value their membership in their council. About sixteen percent of the total or 51 people did not belong and 39 or 11.89 percent were not aware of its existence. Seven people declined answering and the two areas surveyed agreed very closely in their views.

Rating of Trade Competency

In Table XXX 97.57 percent of the people surveyed indicated that their self evaluation of their trade competency was satisfactory or better. Six people in the southern group or 3.73 percent felt they should rate themselves as unsatisfactory in the practical and theoretical aspects of a trade.

Need for Periodical Upgrading

Table XXXI indicates that 65.85 percent of the group of 328 teachers were definitely in favour of periodical upgrading with another 9.15 percent very strongly in favour. There were five respondents or 1.52 percent who felt there was no need for upgrading. Both regions were almost unanimous in their responses.

Evaluation of Occupational Competency

Table XXXII shows that 15.85 percent of the total group surveyed strongly agreed that trade competencies should be evaluated at periodic intervals while another 49.7 percent felt in favour but less strongly. Ten persons strongly disagreed while 17.99 percent had no opinion. Four people did not respond.

TABLE XXX
DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS AND THEIR RATING OF
THEIR TRADE COMPETENCY

Rating	South		North		Alberta Total	
	f	%	f	%	f	%
Excellent	34	21.12	45	26.95	79	24.09
Very Good	79	49.07	81	48.50	160	48.78
Satisfactory	41	25.47	40	23.95	81	24.70
Unsatisfactory	6	3.73	0	0.00	6	1.83
Very Unsatisfactory	0	0.00	0	0.00	0	0.00
No Answer	1	0.62	1	0.60	2	0.61
Total	161	100.0	167	100.0	328	100.0

TABLE XXXI

DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS AS TO THE NEED FOR PERIODICAL UPGRADING

	South		North		Alberta Total	
	f	%	f	%	f	%
Definately	108	67.08	108	64.67	216	65.85
Very Strongly	13	8.07	17	10.18	30	9.15
Strongly	20	12.42	19	11.38	39	11.89
Moderately	17	10.56	19	11.38	36	10.98
Do Not Think There Is A Need	2	11.24	3	1.80	5	1.52
No Answer	1	0.62	1	0.60	2	0.61
Total	161	100.0	167	100.0	328	100.0

TABLE XXXII
DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS BY EVALUATION OF OCCUPATIONAL COMPETENCY

Competency Should Be Evaluated at Periodic Intervals	South		North		Alberta Total	
	f	%	f	%	f	%
Strongly Agree	23	14.29	29	17.37	52	15.85
Agree	70	43.48	93	5.69	163	49.70
No Opinion	37	22.98	22	13.17	59	17.99
Disagree	23	14.29	17	10.18	40	12.20
Strongly Disagree	5	3.11	5	2.99	10	3.05
No Answer	3	1.86	1	0.60	4	1.22
Total	161	100.0	167	100.0	328	100.0

Trade Competence Increased With Working in Industry

Table XXXIII indicates that 72.56 percent of the respondents felt that trade competence would increase if the individual worked at his trade in an industrial milieu. Twenty people or 6.1 percent had no opinion and 12.2 percent indicated that this type of experience would not increase their trade competence.

Value of Evening Courses

The respondents' replies to the above question tabulated in Table XXXIV indicated that 81.71 percent of the total number of teachers felt that evening courses were useful or very useful in teaching trade skills. They represented 266 teachers out of 328 surveyed. Ten persons indicated that it was a waste of time and seventeen or 5.18 percent felt they were not useful. About nine percent had no opinion. There was no great disagreement in the two regions of the province.

Maintaining Membership Connections in Trade

Table XXXV shows that 90.55 percent of the answers indicate what seemed to be a high priority to maintaining trade contacts in industry. Ten respondents felt that one should not maintain these contacts and 3.66 percent had no opinion.

TABLE XXXIII

DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS WHO FEEL WORKING AT THEIR TRADE IN
INDUSTRY MAY INCREASE TRADE COMPETENCE

Trade Competence Increases With Working In Industry	South		North		Alberta Total	
	f	%	f	%	f	%
Yes	120	74.53	118	70.66	238	72.56
No	16	9.94	24	14.37	40	12.20
No Opinion	9	5.59	11	6.59	20	6.10
Other	14	8.70	13	7.78	27	8.23
No Answer	2	1.24	1	0.60	3	0.91
Total	161	100.0	167	100.0	328	100.0

TABLE XXXIV

DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS AS TO THE VALUE OF EVENING
COURSES TO TEACH TRADE SKILLS

Value	South		North		Alberta Total	
	f	%	f	%	f	%
Very Useful	76	47.20	60	35.93	136	41.47
Useful	56	34.78	76	45.51	132	40.24
No Opinion	15	9.32	14	8.38	29	8.84
Not Useful	7	4.35	10	5.99	17	5.18
Waste of Time	5	3.11	5	2.99	10	3.05
No Answer	2	1.24	2	1.20	4	1.22
Total	161	100.0	167	100.0	328	100.0

TABLE XXXV

DISTRIBUTION OF ALBERTA VOCATIONAL TEACHERS WITH RESPECT TO MAINTAINING
MEMBERSHIP CONNECTIONS IN TRADES

Should Maintain Membership In Own Area	South		North		Alberta Total	
	f	%	f	%	f	%
Yes	145	90.06	152	91.02	297	90.55
No	4	2.48	6	3.59	10	3.05
No Opinion	6	3.73	6	3.59	12	3.66
Other	5	3.11	3	1.80	8	2.44
No Answer	1	0.62	0	0.00	1	0.30
Total	161	100.0	167	100.0	328	100.0

I. DISCUSSION

The number of male instructors in the province was 267 as compared with 58 females and the majority of those instructors or about three-quarters of the population were between the ages of thirty to fifty years. Most teachers in the field had been employed by their present employer for three years or less. This compared favourably with the number of years of teaching experience. In other words, most vocational teachers had been with the same employer since leaving the university. Work experience reflected the fact that older people comprised this group. Ninety-three of the people surveyed had more than twenty years of experience. This may be attributed to the fact that most teachers came into the field of vocational education after spending several years in industry. Most of people were taking courses at the university in order to improve their qualifications, but this can probably be attributed to the desire to improve professional qualifications for salary purposes. If courses from technical institutes were available for university credit, the above situation would possibly not pertain as table VII indicates a high desire to take courses from a technical institute in order to improve trade qualifications.

A B.S. degree offered at Purdue (Technical Education News, 1969, p. 20) seems to offer a solution to this dilemma. Eight percent of the preparation time for training teachers for a technical teaching position is devoted to occupational competency per semester. Each student completes 32 to 35 semester hours in a technical specialty as a required part of the B.S. degree. There is a similar program offered at the University of Alberta by the Department of Industrial and Vocational Education, but this is a

package deal for new teachers. Both teacher training and occupational competency by spending time in industry are involved. However, this program is not suitable for those people who already have industrial experience - even though their occupational knowledge may be in need of up-grading.

The level of training adequacy indicated that although vocational teachers felt that their training was adequate, there was still a very strong desire for up-grading. With respect to returning to industry, one may conclude from the data that money is not the prime consideration for returning, position is the important criterion. These facts are supported by a study reported in Technical Education News (Gibbs, 1969, p. 10). The study stated that most teachers coming from industry entered the teaching system with the same or slightly lower salary which they received in industry. Furthermore, there appeared to be some doubt about the often heard theory that in order to recruit new teachers from industry it was necessary only to increase their starting salary.

Vocational teachers had discussed their courses with their colleagues on numerous occasions during the course of their teaching activities and there was a close liaison with their industrial counterparts. The number of years of academic training seemed to indicate that a large proportion of highly professional qualifications comprised the population of teachers of vocational education in the province of Alberta. Industrial training in the occupational specialties of the individuals surveyed indicated that about 82.0 percent had three years or more training in their specialty.

Many teachers came into vocational education from areas which required a university degree. The survey indicated that 26.22 percent of the people had Arts and Science degrees or degrees from other faculties.

Degrees in education showed that 44.91 percent had a bachelor's degree in education, 7.32 percent had a graduate diploma and 2.13 percent had a master's degree. Evidence indicated there were two people with a doctorate teaching also. The bulk of degrees held, in education, were in the specialty of vocational education. It was noted that in comparing vocational teachers with the total population of teachers in Alberta holding a bachelor's degree, 51.22 percent of the group surveyed held a bachelor's degree while 42.23 percent of the total population was the percentage for the province (Annual Report, Department of Education, 1969, p. 74). The investigator feels that the difference of about nine percent may be attributed possibly to the fact that vocational teachers are given a credit of one year on their bachelor's degree and therefore take less time to reach degree qualification. Or perhaps, due to their industrial orientation, they are more aware of the worth of a degree - in remuneration - than their academically oriented colleagues. Also, there are many married women teaching who may not want to acquire a degree since their husbands already earn an adequate salary.

The journeyman's certificate was the most predominant certification of the group while about 10.0 percent indicated no trade certification whatever. It was discovered as the data were in the process of analysis that there were some academic teachers listed by the Department of Education who taught the grade X level of some specialties where properly qualified teachers were not available. It should be noted here that above this level proper specialists must be employed in order to receive the additional grants allocated to vocational pupils.

The mechanical trades were the most prevalent representation amongst the trade certification data surveyed. There were a greater number of

mechanical and electrical certificates held by teachers in the south of the province although there were more vocational teachers in the north. No reason for this difference seemed to be indicated by the data, but one might infer that obviously there were more classrooms in operation in the south of the province offering those types of courses. Teachers in northern Alberta seemed better qualified, since they indicated by a margin of 7.69 percent, trade experience of more than nine years in industry.

The teachers in the north indicated that a percentage of 17.65 more individuals took courses related to their trade areas than in the south. In general, more people in the north took courses of more than one month's duration in their trade area over the past few years. The above could imply that because there have been no vocational courses offered by the universities in the southern part of the province, perhaps interest wanes, while in the north people may be more enthusiastic due to the proximity of evening courses offered towards completion of their degrees. This is mere conjecture on the part of the investigator.

An article of recent date (Kahn, 1970) states that "teachers, for example, will not take the trouble to improve until it is demonstrated that it is in their best interests to do so [p. 21]." Good teaching often goes unrewarded, (good teaching must involve high trade competence) so teachers are busy "professionalizing" themselves, it would seem, in order to receive a higher salary rather than taking courses in their trade areas.

The most favoured length of teaching time before a desired sabbatical to industry was five years. There has been an article which treats upgrading of teachers in this manner (Entorf, Callender, 1969, p. 7). It described a formal exchange program by Stout State University with Deere and Company which involved the exchange of a foundry supervisor with a foundry

instructor. Each organization carried the salaries of their respective employees. This type of exchange would be impossible in the senior high schools of Alberta unless the "supervisor" was a certified teacher. However if teachers could go back to industry it would be a valuable experience as indications in Table XXXI are very strongly in favour of this type of arrangement. Table XXXIII gives further support to the idea while there was a suggestion in the literature (Dobrovolny, 1970, p. TE2), that Technical teachers should be encouraged to take summer experience that relate to the technical specialty they are teaching and also that they maintain a viable dialogue with industry in their subject matter specialty.

University courses in trade competence have been indicated as highly desirable for increasing trade competency. Table XXVII indicates that the majority of vocational teachers would favour courses in occupational competency, as suggested earlier in this section, such as those offered by Purdue University. There seems to be an increase in the amount of literature which treats this area, in recent months, no doubt the need for up-grading is being felt by many institutions. There was a strong feeling by the respondents that evening courses were also valuable in teaching skills for up-grading purposes. Results of this survey are supported (Feirer, 1970) by literature reviewed recently by the investigator in that technical staff must find time "to keep up-to-date with developments in their own specialty and in educational areas [p. TE 15]."

Summary

The need for up-grading trade competencies was indicated by the literature and by the data. The results in Table XXXI show that 75.0 percent of the respondents were in favour of periodical up-grading and about 65.0 percent felt that their occupational competency should be evaluated periodically too (Table XXXII). Evidence indicated a desire for the above services but who should perform these functions was not clearly determined. The ATA Specialist Council was not considered to be useful in performing the function of up-grading by 46.95 percent of the respondents.

CHAPTER V

SUMMARY AND CONCLUSIONS

The final chapter of the study presents a summary of the problem, procedure, and findings. Comments and the implications which have become noticeable as a result of the findings are treated in the second section and finally recommendations for further study complete the chapter.

I. SUMMARY

The Problem

Certification is based on academic and trade qualifications but not on trade competency. The purpose of this study was to examine the need for trade competency tests for vocational teacher certification and whether up-grading at periodic intervals might be of importance to the individual and to education. The responses to the survey were analyzed in order to determine if a consensus existed on ways to deal with the problem or whether it was desirable to do so.

The Procedure

The data were collected by using the instrument which appears in Appendix C. IBM answer sheets were used by the respondents to answer the questionnaire. The total population of the vocational teachers in the province of Alberta were surveyed. The answer sheets were scanned optically to yield information for the data cards. Analysis was done by using the computer to tabulate the frequency and percentage of the responses. Thirty-five tables were used to display the findings.

The Findings

In answer to the problem statement, the data indicated that the majority of vocational teachers in the province of Alberta agreed in principle that "trade competency" was one of the criteria of good teaching. This was supported by the answers tabulated in Tables XXXI and XXXII in particular. Based on the data, a trade competency examination would probably be accepted by vocational teachers just as educators are aware of the necessity to up-grade academic qualifications. Whether this should be done at the time of certification was not clear, but the results of the survey and from the literature indicated that periodical up-grading was not only necessary, but would be welcomed.

In reply to the questions to be studied as indicated in Chapter I, the results were as follows:

(a) Up-grading was definitely desired by 65.85 percent of the group while another 9.15 percent were very strongly in favour. Thus a large majority or 75.0 percent of the respondents agreed that periodical up-grading was a necessity.

(b) With respect to trade qualifications, the majority of the instructors felt that although their training was adequate, there was a great desire for further training.

(c) A count of the teachers possessing degrees indicated that vocational teachers are better educationally qualified than the average teacher in the province. Teachers with a degree averaged 42.23 percent of the total population of teachers in Alberta while the percentage of degreed teachers in the vocational group surveyed amounted to 51.22 percent (Annual Report, Department of Education, 1969, p. 74).

(d) A check of trade competencies at periodic intervals was indicated as desirable by 65.55 percent of the group.

An important finding as a result of the questions which were asked was that only 17.07 percent of the respondents were willing to go back to industry for a higher salary. Almost 30.0 percent expected an executive position if they were to return to their industrial occupations. University courses in occupational competency were highly desirable as well as sabbaticals to industry. Another finding of importance was that there seemed to be a great lack of participation by the ATA Specialist Council in looking after the needs of vocational teachers. As suggested in the literature, working in industry during the summer months had a strong appeal to the vocational teachers in the senior high schools of Alberta as a means to keep their occupational competencies up-to-date.

II. CONCLUSIONS

The study concluded that about 65.0 percent of the respondents wanted a periodic evaluation of occupational competency in their trade area and 75.0 percent were in favour of periodical up-grading of this competence in their trade specialty. No conclusion was arrived at with regard to trade competency examinations at the time of teacher certification, but one may conclude that since a periodic evaluation of occupational competency was indicated, as desirable, the teacher candidate who has not been checked on his competency for several years before his entry into the teaching field, should be tested in both the theoretical and practical aspects of his trade at the time of initial certification.

Another conclusion which can be made as a result of the study is that the respondents want some kind of liaison with industry. Two hundred and thirty-eight or 72.56 percent of the teachers indicated that trade competence increases if the individual works at his trade in an industrial milieu. Further, 81.71 percent of the respondents indicated that evening courses are of value to learn trade skills.

III. COMMENTS AND IMPLICATIONS

On the basis of the data and the literature, (Gibbs, 1969, p. 10) it should be noted that salary considerations did not seem to be important when people were asked whether they wanted to return to industry under certain conditions (Table IX). Most teachers surveyed who entered the teaching field from industry had been placed on the salary grid at an equivalent or slightly lower income than they had while working at their occupations. Therefore, it would be reasonable to assume that the argument about the difficulty of recruiting new teachers or keeping experienced ones by being able to pay them "enough" could be construed to be a myth. Perhaps lack of matriculation is the real reason.

Also, implications seem to be that the ATA Specialist Council in Industrial Arts and Vocational Education had better take a look at its function -- that of helping to promote growth and stature of its members. Table XXIX indicates that 46.95 percent of the respondents did not value their membership in their council. Perhaps there are very few members, or poor representation from the group surveyed. The kind of consensus arrived at by the questionnaire would seem to indicate an opportunity for an inquiry into why the respondents felt as they did about their own organization.

Another implication indicated by 65.86 percent of the people surveyed suggests that they would value university courses which tie theory and practice together (Table XXVIII). This approach is supported by the existence of such a program at Purdue (Technical Education News, 1969, p. 20) as mentioned earlier in Chapter IV in the Discussion.

The Department of Education should be looking at studies such as this one which indicate that performance tests in theory and practice should be used. Shimberg (Griesse, 1968, p. 35) indicates their use for an accurate assessment of the individual's trade competency as well as the mechanics for construction of such tests. Feirer (1970) indicates the importance of trade competence. He states that technical staff must find time "to keep up-to-date with developments in their own specialty [p. TE 15]."

A final implication is one which sets out the need for liaison with industry (Table XXXIII). Someone, perhaps the ATA Specialist Council, is needed to try to organize such cooperation. If teachers are not kept up-to-date, vocational education may suffer because of the deterioration of the quality of the instructors. As suggested in an earlier section of this thesis, (Entorf and Callender, 1969, p. 7) exchanges or time spent in industry with salaries to match those presently received by the individual is one way of maintaining liaison. The investigator feels that the industrial environment provides a learning situation which cannot be duplicated with seminars and courses in another milieu.

In referring to the letters from authorities on which this study was based, answers to some of the questions and suggestions by the writers have resulted. The suggestion of a sabbatical to industry was shown to be desirable, but after five years, not after seven as suggested by one of the

letters (Harder, Appendix D). The question that people should work at their trades in summer was very affirmative and so was the desire for evening courses at an institute of technology. University courses which tie theory and practice together rated highly, but as suggested by one of the writers (Harder, Appendix D), if credit from a technical institute could be transferred to a university program this would serve the purpose of helping to keep the vocational teacher up-to-date.

IV. RECOMMENDATIONS FOR FURTHER STUDY

This has been the first study of the qualifications of vocational teachers in the province of Alberta since the participation of the Federal Government with the Technical and Vocational Training Assistance Act of December 20, 1960 (Annual Report, 1961, p. 76) which helped to prepare vocational teaching specialists. A great deal of enthusiasm was shown by the respondents in their recommendations for changes in the questionnaire during the pilot study and in the high percentage of returns (86.53 percent). The following recommendations for further study are aimed to encourage a further look into facts which may aid to cement the bonds of a relatively new field of education in the high school program.

1. A study to determine whether an instructor should be re-employed in industry in order to keep his competency up-to-date and the changes which would be necessary to bring this about. The survey indicated that this would be desirable but no conclusions as to how a scheme of this kind could be implemented were arrived at.
2. A replication of the study just completed but using business education teachers in the high schools as the population to be surveyed.

3. A study of post-secondary institutions using the same instrument as used here since the implications of this study do not apply in total to post-secondary education in the technological institutes or in the community colleges. It may be valuable to know how the results of these institutes compare with those of high schools.

4. A study to compare vocational education programs in each province of Canada in order to compare their goals of vocational education and how to determine whether these goals could be unified in a national program.

5. A study of the function of the ATA Speciality Council. Do members of other councils feel as those of IAVEC do? Perhaps the structure and need of the council should be re-examined.

6. A study to check on the number of vocational teachers who have gone back to industry and the reasons for their so doing. A part of this study could inquire into recruitment practices and the satisfaction or dissatisfaction of those presently engaged in the teaching milieu.

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SECRET

APPENDIX A

15232 - 84th Street,
Edmonton, Alberta.
February 10, 1970

Dear Sir:

I am conducting a survey to determine whether the trade competencies of vocational teachers who have taught more than five years are up-to-date. Answers to the following questions would be helpful in this regard.

1. What provisions do you have for ensuring that these trade competencies are kept up-to-date.
2. What provision would you like to see instituted e.g. return to industry one year out of every five, mandatory night or summer courses for upgrading purposes given by technical institutes, courses given by industry, etc.

The results of this survey will be used as the basis for a Master's Thesis reflecting the opinions of authorities in the field as to the need for introducing upgrading procedures in the trade competencies of vocational teachers -- reflecting the changes that the advances in technology in our society have made necessary.

Thank you kindly for your cooperation.

Yours truly,

APPENDIX B

15232 - 84 Avenue
Edmonton, Alberta
April 8, 1970

Dear Sir:

I appreciate the inconvenience of the number of questionnaires which you are requested to attend to during the year. Could you kindly do it once more? The cover letter on each booklet explains the nature of the study and I am deeply indebted to you for your cooperation.

If you will have someone pass these out to the people on the enclosed list and return them to me as quickly as possible, I would be very grateful. If any person on the list does not complete the answer sheet, please state the reason, such as illness, etc. In this way I shall be able to account for the total population of vocational teachers.

Results of this study will be mailed to each school early during the month of September.

Thank you kindly, and I hope to hear from you at your earliest convenience.

Yours truly,

E. J. Fiala

JC

APPENDIX C

April 2, 1970

To: Teachers of Vocational Education

Many of you have indicated your concerns about ways and means of up-dating your trade qualifications. Mr. Fiala, in a study for a master's degree, is attempting to assess the opinions of all vocational teachers as to their positions on a number of issues relevant to this problem.

I believe this study could result in findings valuable in the planning of future training programs in Alberta. For this reason, I would ask you to cooperate by completing the instrument enclosed.

Yours sincerely,

J. D. Harder,
High School Inspector of
Industrial Education.

DIRECTIONS TO RESPONDENTS

1. Please record all responses on the answer sheet. Do not write in the booklet.
2. Do not place your name at the top of the answer sheet.
3. For each question select the answer which best describes your situation and blacken the appropriate space on the answer sheet.
4. Do not give more than one answer for any one item.
5. Use an HB pencil to record your responses. A pen or any similar device will not be read by the electronic reader.
6. If you make an error and wish to change the answer, please be certain to erase your original work completely.
7. Please return the unmarked booklet with your answer sheet.

1. What is your sex?
 - a. male
 - b. female
2. What is your age?
 - a. 20-25 years inclusive
 - b. 26-30 years inclusive
 - c. 31-39 years inclusive
 - d. 40-49 years inclusive
 - e. 50 years and over
3. How many years have you been employed at this Institution including this year?
 - a. 1 year
 - b. 2-3 years
 - c. 4-5 years
 - d. 6-9 years
 - e. 10 or more years
4. How many total years of teaching experience do you have? Include experience at all levels of education.
 - a. 1-3 years
 - b. 4-6 years
 - c. 7-10 years
 - d. 11-14 years
 - e. 15 or more years
5. How many total years of work experience do you have?
 - a. 1-5 years
 - b. 5-10 years
 - c. 11-15 years
 - d. 16-20 years
 - e. 21 or more years
6. Are you presently taking courses to improve your qualifications?
 - a. Yes, at a University
 - b. Yes, at a technical institute
 - c. Yes, by correspondence and/or at high school
 - d. Yes, in industry
 - e. No
7. If you plan to take a technical course within the next twelve months to improve your trade qualifications, state where you would take it.
 - a. At a university
 - b. At a technical institute
 - c. By correspondence and/or at high school
 - d. In industry
 - e. Other

8. How do you feel about your present level of training and its value to you as an instructor in your present field?
 - a. My training is very adequate
 - b. My training is adequate
 - c. My training is satisfactory
 - d. My training is inadequate
 - e. My training is very inadequate
9. Under what conditions would you accept a position in industry?
 - a. If the salary was the same as you presently receive
 - b. If my present job conditions do not improve
 - c. If the salary was higher
 - d. If the position was at an executive level
 - e. Other
10. How often during the past year have you discussed the content of the trade course you are teaching, with fellow vocational instructors?
 - a. I have discussed it numerous times with other instructors
 - b. I have discussed it a few times with other instructors
 - c. I have not discussed my courses with other instructors
11. During the past year have you discussed the content of the trade course you are teaching, with members of industry?
 - a. I have discussed it numerous times with members of industry
 - b. I have discussed it a few times with members of industry
 - c. I have not discussed my courses with members of industry
- 12.. What is your total number of years of academic training beyond high school?
 - a. 1-2 years
 - b. 3-4 years
 - c. 5-7 years
 - d. 8-10 years
 - e. 11 or more years
13. What is your total number of years of industrial training beyond high school?
 - a. 1-2 years
 - b. 3-4 years
 - c. 5-7 years
 - d. 8-10 years
 - e. 11 or more years
14. Do you have a university degree in
 - a. Arts
 - b. Science
 - c. Other - except education

15. Do you have a
- Bachelor degree in education
 - Graduate diploma in education
 - Master's degree in education
 - Doctorate in education
 - Other (in education)
16. In item 15 what is your area specialty?
- Elementary Education
 - Secondary Education
 - Vocational Education
 - Special Education
 - Other
17. How many Bachelor's degrees do you hold?
- none
 - 1
 - 2
 - more than 2
 - only partial credit toward a degree (5 or more courses)
18. How many Master's degrees do you hold?
- none
 - 1
 - 2
 - more than 2
 - only partial credit toward a degree (5 or more courses)
19. How many Doctorate degrees do you hold?
- none
 - 1
 - 2
 - more than 2
 - only partial credit toward a degree (5 or more courses)
20. How many trades do you hold certificates in?
- 1
 - 2
 - 3
 - 4
 - 5 or more
21. Is your certificate (if you hold more than one, indicate only the certificate considered most valuable in your present position)
- a Master's Certificate
 - a Journeyman's Certificate
 - a Technician's Certificate
 - a Diploma (eg. in a short term course)
 - Other

22. To which of the following areas does your certificate apply? (If you hold more than one certificate, indicate only the certificate considered most valuable in your present position)
- a. Mechanical area
 - b. Electrical area
 - c. Construction area
 - d. Commercial or Business area
 - e. Other
23. How many years have you worked at your trade since trade certification?
- a. 1-2 years
 - b. 3-5 years
 - c. 6-9 years
 - d. 10 years or more
 - e. Less than one complete year
24. Have you ever owned your own business in your trade area?
- a. no
 - b. yes
25. How many years has it been since you took a course of greater than one month's duration, related to your trade area?
- a. 1-2 years
 - b. 3-4 years
 - c. 5-6 years
 - d. 7-10 years
 - e. more than 10 years
26. How many years has it been since you took a course of greater than one month's duration, in your trade area?
- a. 1 year
 - b. 2-3 years
 - c. 4-5 years
 - d. 6-15 years
 - e. 16 or more years
27. Do you feel that there should be sabbaticals to industry every
- a. 3 years
 - b. 4 years
 - c. 5 years
 - d. 6 years
 - e. Do not think there should be
28. Should university courses which tie theory and practice together (competency) be made available
- a. I feel very strongly that they should be
 - b. I do not feel they would be very important
 - c. They would not be important
 - d. I do not wish to answer
 - e. Other

29. Is the work of the A.T.A. specialist councils valuable in helping to keep your trade knowledge up-to-date?
- a. It is very valuable
 - b. It is valuable
 - c. It is not valuable
 - d. I do not belong to a council
 - e. I did not know the council existed
30. How do you rate your trade competency?
- a. Excellent
 - b. Very good
 - c. Satisfactory
 - d. Unsatisfactory
 - e. Very unsatisfactory
31. Do you feel that there is a need for periodical upgrading?
- a. Definitely
 - b. Very strongly
 - c. Strongly
 - d. Moderately
 - e. I do not think upgrading is required
32. Occupational competency should be evaluated at periodic intervals
- a. I strongly agree
 - b. I agree
 - c. No opinion
 - d. I disagree
 - e. I strongly disagree
33. If you were free to work in your trade in industry during the summer, do you feel this experience would increase your trade competence?
- a. Yes
 - b. No
 - c. No opinion
 - d. Other
34. What is your opinion as to the usefulness of evening courses at a technical institute for learning new skills in your trade area?
- a. I think they are very useful
 - b. I think they are useful
 - c. No opinion
 - d. They are not useful
 - e. They are a waster of time
35. It is desirable to maintain business and membership connections with your trade?
- a. Yes
 - b. No
 - c. No opinion
 - d. Other

APPENDIX D

February 17, 1970

Mr. E.J. Fiala
15232 - 84 Avenue
Edmonton, Alberta

Dear Mr. Fiala:

In response to your two questions may I react as follows:

1. We are encouraging teacher groups to organize in-service sessions. During the recent semester change-over our teachers of electronics and of electricity held workshop sessions at NAIT. At the same time the teachers of automotives, of building construction, and of drafting held in-service meetings with respect to trends in industry.

In the course of a year all teacher groups have from two to five or six between-school meetings -- mainly for curriculum development work rather than for up-dating with respect to trade competencies.

2. I would like to see a range of provisions instituted: Workshops, in-service sessions re trends, semester release arrangement, work-study arrangement for diploma work, extension short courses arranged by a post-secondary institution, and divided school year. The divided school year and possibly an eleven month year could be of immense value for such provisions. Time-off from school activities is expensive, but the need is there -- particularly where the teacher has taught more than five years without returning to industry. After five years most of such teachers will have completed degree requirements.

Enclosed for your file is a copy of our in-service program proposal and our evaluation sheet.

Kindest regards,

G.A. Sanders
Director of Curriculum
(Vocational Education)

GAS/wv

February 17, 1970

Mr. E.J. Fiala
15232 - 84 Avenue
Edmonton 51. Alberta

Dear Mr. Fiala:

In reply to your survey we offer the following responses:

1. To enable our vocational teachers to keep up-to-date in their specialties our system provides release time for their attendance at conferences, field schools and seminars.

Our staff is encouraged to maintain membership in their respective associations, unions, etc.

The school librarians are encouraged to subscribe to trade magazines and bulletins.

2. Our system is indeed aware of the need for vocational teachers to keep abreast of technological changes. Our teachers, themselves, have expressed this concern and indeed have done something about it. Our staff has joined other staffs in the Edmonton region to organize seminars and workshops in the various areas of concern. This is perhaps one of the most effective ways of providing inservice. There was a felt need and those that recognized this need did something about it. Perhaps in the not-too-distant future, when the school year is changed, such inservice can be organized on a regular basis.

Suggestions to have inservice courses recognized for credit or salary purposes have been of no avail.

We have the above responses will be helpful in your study. Our school system would be most interested in the results of your survey.

Sincerely,

W.N. Pura
Director Vocational Education

WNP/pb

February 18, 1970

Dear Mr. Fiala:

In response to the questions in your letter of February 14, I can make the following comments:

In your first question you ask about provisions for up-dating teachers' trade competencies. This can be received in two ways. There are provisions in the sense that possibilities exist for teachers to up-grade their competencies by taking courses in the technical institutes or go to work in their trade area for the summer. Some fellows, in fact, now do this. Such activities are not sponsored by the employer and are not required to maintain certification.

There are a number of up-grading activities I would like to see instituted. These could be divided into two categories, those required to maintain certification and those related to in-service education.

In the certificate maintenance category, the following approaches would be practical and would help keep the knowledge of trade teachers relevant.

1. Institution of a sabbatical leave after every seven years. This leave to be given to teachers taking courses in their trade area at the institutes of technology, community college or university, or working in industry. Their salary would be maintained at a certain pre-arranged minimum regardless of which route for up-dating was selected.
2. Certification could also be maintained by taking summer school or evening credit courses at the institute of technology which would be part of their undergraduate degree program. However, regardless of whether the courses applied to a degree or not, a minimum of one related technical or trade course would be required every three years.

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The second category consists primarily of in-service education programs. Here is where the teacher will have to take the initiative. At the same time, I feel that school boards should allow a teacher to use five school days during the contract period without loss of pay. In addition, subsistence and travel expenses should be paid by the employer.

Another approach to in-service education would be the requirement that teachers' holiday time be reduced to six weeks during the summer and that they be required to spend the remaining two weeks in in-service education. Again, this would be sponsored by the employer.

I trust these ideas will stimulate you in your study.

Yours sincerely,

J.D. Harder,
High School Inspector of
Industrial Education.

Mr. E.J. Fiala,
15232 - 84th Avenue,
Edmonton 51, Alberta.

February 25, 1970

Dear Mr. Fiala:

Re: Trade Competencies of Vocational Teachers

Comments to the questions posed:

1. The Department of Education hasn't developed any provisions to ensure that trade competencies are kept up-to-date. In-service education is provided on a cooperative basis with the A.T.A. Specialists Councils and the University of Alberta.
2. It is unreasonable to expect teachers to return to industry for a period of a year. I would like to see teachers return into industry and business during the summer break for a period of four to six weeks. During this time, emphasis should be on changing technology and on methods or new processes developed to use the technology. The basic concepts and principles do not change too drastically and proficiency in particular skill trades isn't as important as the over-all knowledge of most current trends and practices.

This objective can be achieved partly by initiating work-study experiences. Business and industry can then serve as a laboratory for both students and teachers. A realistic approach is to get both the learner and the teacher into the environment. Much that business and industry can offer our students cannot be picked up by a professional and then imparted to the learner.

Cooperative agreements should be developed between industry and school systems whereby teachers can seek employment (with pay by industry) for short periods of time in order to subject teachers to the milieu of the world of work.

University courses should be developed which do tie theory and practice together. This implies that University should use human and material resources from industry and business for preservice and in-service programs.

- 2 -

The onus is on the teacher. It is his or her professional responsibility to be involved with the business and industry environment. There is too much demand on other agencies to develop means and money and time and not enough professional willingness through councils and on individual basis to stay on top of the changes and advances in technology.

One other avenue for the dissemination of ideas and practices is teacher exchange between schools and systems or between high schools and institutes and colleges.

You probably note that I have not made too much mention of acquisition of skills. It is my firm belief that we need to place more emphasis on fundamental ideas and people in business and industry. A sound knowledge of business and industry and a good understanding of the people in these environments should better prepare our students for the ever changing technology and practices.

Yours truly,

W. T. Worbets
High School Inspector

Mr. E.J. Fiala
15232 - 84th Avenue
Edmonton, Alberta.

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